UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GUANGQIANG and ATTILA ANTALFY

Appeal 2007-0735
Application 10/821,023
Technology Center 1700

Decided: February 12, 2007

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and CHARLES F. WARREN, *Administrative Patent Judges.*

KIMLIN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-13. Claim 1 is illustrative:

1. A component assembly suitable for use in living tissue comprising:

a stainless steel part;

a titanium part; and

a filter material comprising at least one nickel foil layer and at least one titanium foil layer for bonding said stainless steel part to said titanium part.

The Examiner relies upon the following references as evidence of obviousness:

Cusano	US 3,994,430	Nov. 30, 1976
Chang	US 6,722,002 B1	Apr. 20, 2004

Appellants' claimed invention is directed to an assembly of components comprising stainless steel and titanium parts bonded together. A filler material is used for the bonding and comprises at least one nickel foil layer and at least one titanium foil layer. The assembly can be used in living tissue.

Appealed claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang. Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang in view of Cusano.[1]

Appellants have not presented separate arguments for any particular claim against the § 103 rejection of claims 1-12. Accordingly, claims 1-12 stand or fall together.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art.

[1] The Examiner has withdrawn the rejections based on the admitted prior art.

Accordingly, we will sustain the Examiner's rejections for the reasons set forth in the Answer, and we add the following primarily for emphasis.

We consider first the § 103 rejection of claims 1-12 over Chang. Like Appellants, Chang discloses a bonding assembly comprising at least one nickel foil layer and at least one titanium foil layer, e.g., a foil made up of discrete layers of titanium and nickel, such as a foil of Ni/Ti/Ni (*see* Abstract). Also, Chang teaches that the brazing or bonding foils are useful for brazing components such as Ti and iron-based alloys, which include steel (*see* col. 5, ll. 41-43). In addition, Chang expressly discloses that the Ni/Ti/Ni bonding composite can be bonded to stainless steel (col. 6, ll. 52-55), and a five-layer bonding composite comprising Ni/Ti/Ni can bond two sheets of Ti (col. 6, ll. 58-60). Accordingly, since Chang teaches that a bonding assembly comprising the presently claimed at least one nickel foil layer and at least one titanium foil layer can be bonded to stainless steel and titanium, separately, we fully concur with the Examiner that one of ordinary skill in the art would have found it obvious to use the bonding assembly of Chang to adhere a stainless steel part to a titanium part. The motivation and requisite reasonable expectation of success arises from the fact that it was known in the art that the claimed bonding filler material comprising at least one nickel foil layer and at least one titanium foil layer bonds well to both stainless steel and titanium.

Appellants contend that Chang relates to non-analogous art since "[t]he roll bonding method taught by Chang to form a multi-layer alloy strip

or foil made up of discrete layers uses a cold-rolling process without annealing . . . [whereas] appellants teach a brazing method of forming a component assembly in which a foil filler material is used" (principal Br. 6, second para.) As noted by the Examiner, however, this argument is not germane to the subject matter defined by the appealed claims. The appealed claims define a component assembly, not a method, let alone, specifically, a brazing method.

Appellants also emphasize that "Chang does not teach bonding of stainless [steel] to titanium" (principal Br. 6, penultimate para.) However, while this argument might be effective against a rejection under § 102, the Examiner properly points out that the rejection is under § 103, and Appellants have not presented any argument concerning why the relevant disclosures of Chang would not have made it obvious to use Chang's bonding foil to bond stainless steel to titanium.

Appellants also maintain that "Chang conspicuously limits his teachings to exclude brazing stainless steel to titanium" (principal Br. 6, last para.). However, Appellants do not cite any specific disclosure in Chang to support this argument, and our review of the reference finds no such teaching relevant to the exclusion of bonding stainless steel to titanium.

Appellants also cite Chang at column 8, lines 7-13 for the argument that "Chang teaches away from the use of titanium" (principal Br. 7, second para.). However, although Chang discloses several advantages of using

copper instead of nickel, the reference explicitly teaches that "[t]he choice of the fraying faces on the multi-layer brazing alloys can be either Cu or Ni" (col. 8, ll. 7-8). This preference for copper over nickel is not seen as a teaching away from Ti in the reference multi-layer bonding foil.

As for the Examiner's separate § 103 rejection of claim 13 over Chang in view of Cusano, we totally agree with the Examiner that it would have been obvious for one of ordinary skill in the art, based on the Cusano disclosure, to provide the bonding materials in particulate form. Also, Appellants' Reply Brief does not address the Examiner's citation of the acknowledgement made in the Amendment filed on October 3, 2005, namely, "it is well known to those skilled in the art to apply the bonding agent/brazing filler metal in the form of foil or in the form of particulate" (Amend. 5, ll. 10-11).

As a final point, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the prima facie case of obviousness established by the Examiner.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2004).

AFFIRMED

clj

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